# NU ENVIRONMENTAL NU S



Newsletter of the N.H. Department of Environmental Services

September/ October 2007

#### Governor's Message

# A look at this year's environmental legislation

The recently completed legislative session was one of the most productive in New Hampshire history, including our efforts to protect the beautiful natural environment that makes New Hampshire such a great place to live and work.



Governor Lynch

We permanently banned the burning of toxic construction and demolition debris in New Hampshire. Construction and demolition debris can contain many toxic sub-

stances – including mercury, lead and arsenic. With this new law, we are better protecting the health of New Hampshire's people and the health of our state's environment.

I have set a goal of ensuring 25 percent of our state's energy comes from renewable sources by 2025. The passage this year of the Renewable Energy Act, which creates incentives for energy companies to use more renewable fuel sources, is a key component in reaching that goal. Increasing renewable energy use will increase New Hampshire and our nation's energy independence, lessening our need for foreign oil and for expensive natural gas.

Increasing renewable energy use will also help protect our state's spe-

Governor, continued on page 8

Commissioner's Column

# New Hampshire's shorelands – out of the past and into the future

Our state is blessed with a wealth of water resources. The retreat of the glacier some 10,000 to 12,000 years ago left us the lakes, ponds, and rivers that populate our present day picturesque topography. Verdant forests rooted in soils that have evolved over thousands of years surround and buffer these waterbodies and are a natural provider of water quality protection. Historically, New Hampshire has valued its forests for their beauty and their ability to provide a sustainable economic resource. But forests do much more than that – especially when they surround water. Forested buffers serve to control erosion, promote stormwater infiltration, retain sediment, take up excess nutrients, moderate near shore surface water temperature, provide wildlife habitat, and help facilitate groundwater recharge. In short, native trees and vegetation provide us with essential ecologic services.

In June of 2007, the legislature enacted important amendments to the Comprehensive Shoreland Protection Act (CSPA). The existing CSPA provides protection to the state's public waters by establishing a 150' forested buffer area as well as restricted use areas within 250' of lakes, large ponds and our state's largest rivers. These amendments enhance the current CSPA and were based on recommendations from a legislative commission convened in 2005 to examine the strengths and weaknesses of the statute.

Commissioner, continued on page 2



Verdant forests rooted in soils that have evolved over thousands of years are a natural provider of water quality protection. Photo courtesy of Kally Abrams.

## Commissioner continued from page 1

The changes, effective April 1, 2008, are broad in scope and are designed to strike a balance between the desires of shoreland property owners and the need to protect our shoreland resource. The amendments establish a permit program for construction, excavation and filling activities within the protected shoreland, a 50' waterfront buffer in which vegetation removal is restricted and pesticides and herbicides are prohibited, and impervious surface limitations. An additional 1.391 miles of river will come under the protection of the CSPA as a result of the adoption of the New Hampshire Hydrography Dataset for stream order determination. All rivers

#### Woodland buffers - Redefining the concept of "well distributed stand"

Inder the existing CSPA, within 150' of the surface water, no more than 50 percent of the basal area of trees and 50 percent of the number of saplings can be removed in a 20-year period provided that a well distributed stand of all vegetation layers remains.

With the implementation of the new legislation, the basal area calculation is eliminated and a grid and



Photo by Christie Peshka.

points system will be used to measure and maintain enough tree cover within 50' of the surface water to buffer the waterbody. In the natural woodland buffer, the restrictions on impervious surfaces and disturbed area will allow development while leaving vegetation to provide additional buffering capacity.

#### Other CSPA changes

- The removal of the prohibition on vertical expansions of non-conforming structures.
- New lots will need 150' of shoreline frontage per residential unit whether or not there is on-site septic.
- A statewide 50' primary building setback - no exceptions. Municipalities may continue to enact or maintain their own local ordinances that establish greater setbacks.
- A requirement to leave 50 percent of the area *outside* of *impervious surfaces* within the 150' natural woodland buffer undisturbed.

designated under the state's Rivers Management Act, including the Saco and Pemigewasset Rivers, will now come under the protection of the CSPA. Other changes to the CSPA (see box above) were made to clarify provisions related to vertical expansion, shoreline frontage requirements, a statewide primary building setback, and restrictions related to impervious surfaces.

To promote broad public understanding of, and compliance with, the new CSPA provisions, DES expects to enlist the assistance of many of our partners and stakeholders to develop and implement a major outreach effort to educate the public, contractors, municipalities and other interested parties. We all have an interest in the long-term integrity of our public waters. Through the CSPA and the stewardship efforts of shoreland property owners, we can ensure that future development of the shoreline protects water quality and the quality of life on our state's water bodies.

For more information please visit the DES Shoreland website at www.des.nh.gov/cspa.

Thomas Burack, Commissioner

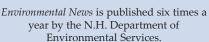
#### DES selects CEI to help with state water resources plan

ES has selected Comprehensive Environmental Inc. of Merrimack to assist in Phase I of the State Water Resources Plan.

Phase I of the plan involves preparing an overview of existing statewide water resources, measures currently taken to protect them, and additional measures needed. The document will include input from various DES programs as well as community stakeholders and is expected to guide the development of a statewide water resources plan. Ultimately, the plan will help ensure that New Hampshire residents receive a high level of water quality and sufficient quantity as well as the necessary protection of essential environmental resources.

DES noted the company's 20 years of experience with New Hampshire municipalities, water systems, and regional water supply projects; its demonstrated knowledge of the state's water resources issues; and the firm's focus on water resources projects.

# ENVIRONMENTAL N E W S



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#### Outdoor wood-fired boilers raise environmental and health concerns

utdoor wood-fired boilers (OWBs), also referred to as outdoor wood furnaces or outdoor woodfired hydronic heaters, are free-standing, wood-burning devices that heat water, which is then pumped to one or more structures to provide heat. They may be used to heat homes and buildings, produce domestic hot water, heat swimming pools or hot tubs, and provide heat to agricultural operations such as green houses and dairies. Over the past few years, the use of OWBs to provide heat has increased in New Hampshire and throughout the Northeast, primarily as a result of rising fuel costs.

The problem with OWBs is they produce air pollution and are less efficient than other home heating devices. They can create heavy smoke that may impact human health, and may also be a nuisance and harm the environment. While wood is a renewable resource and can be "global warmingneutral" when harvested in a sustainable manner, these attributes are negated if people use devices like OWBs that are inefficient and produce significant amounts of air pollution.

Unlike other residential wood burning devices such as indoor wood stoves and pellet stoves, OWBs are not required to meet federal emission standards and are not yet EPA-certified. With smoldering fires and short smokestacks, they often release heavy



An OWB in Vermont helps to illustrate why there are environmental concerns with these devices.

smoke close to the ground, where it creates a nuisance and is unhealthy to breathe. Smoke from OWBs contains fine particles, which can be carried deep into the lungs and can aggravate existing medical conditions such as asthma or lung and heart disease. Exposure to other pollutants in the smoke, such as benzene or polycyclic aromatic hydrocarbons, can cause a diverse range of harmful health effects, including asthmatic sensitivity, lung illnesses and cancer.

A solution to using an OWB would be to choose an alternative heating system that is cleaner and more efficient. One alternative might be an indoor wood stove, which must be certified by EPA to meet air emissions standards. Current OWB owners, should make sure that they are properly installed, operated, and maintained to decrease their harmful health and environmental affects. If at all possible, existing units should be replaced with a cleaner, more efficient heating system.

Another step that some states and regional organizations are taking in the absence of federal regulation of OWBs is to establish emissions standards and prohibit the sale or installation of any unit that does not meet the standards. For example, both Maine and Vermont have passed legislation and/or regulations in 2007 that establish emissions standards for units sold after certain dates, and other New England states are considering or taking similar actions.

At the federal level, EPA initiated a voluntary partnership with manufacturers to produce and sell cleaner, more efficient OWBs that meet a certain performance level. If you choose to buy an OWB, you should look for the cleanest models available, especially those with special labeling that identifies how they compare to EPA's performance specifications.

For more information on OWBs and best management practices for proper operation, contact the DES Air Resources Division at (603) 271-1370.

#### Reminder: State law prohibits open burning of trash

eginning in 2003, the state Leg-D islature prohibited the open burning of combustible domestic waste (garbage and trash) to protect public health and to reduce the emissions of dioxins in the state. In addition, state rules prohibit the open burning of tires and any open burning for the purpose of salvage or reclamation. So please, don't burn your trash. It's bad for your health and could get you into trouble with the law!

## Change a Light - Change the World

ctober 3 is Change a Light Day. The Energy Star Change a Light campaign is a national challenge to encourage every American to help change the world, one light – one energy-saving step – at a time. Take the challenge, and commit to replace at least one light in your home with an Energy Star compact fluorescent light (CFL). Energy Star CFLs use 75 percent less energy than incandescent bulbs and last six to 10 times longer.

The New Hampshire campaign to date has brought in 6,120 pledges, resulting in 14,091 bulbs replaced, \$397, 366 in energy costs savings, and over 6.27 million-pounds-reduction of greenhouse gases! Take the pledge today!

## DES rocks at the John Mayer "eco-village"

By Kristina Drociak, Public Information & Permitting Intern

This summer, along with numerous other outreach events across the state, DES had a display at the John Mayer rock concert in Manchester. In mid-July, several DES employees represented the agency at the "eco-village," which was set up in the lobby of the Verizon Center preceding the concert. John Mayer, as well as many other well known artists, went on tour this summer with the non-profit environmental group Reverb, working to lessen the impact of their concerts. At each venue, local and national non-profit environmental groups join together to form an eco-village with booths and exhibits aimed at educating, motivating, and activating concert-goers to be more environmentally conscious of their actions.

Along with educational efforts, John Mayer and other artists who tour with Reverb have committed to additional waste and energy reducing activities, including but not limited to: neutralizing CO<sub>2</sub> emissions from the power used at shows and fuel burned in tour buses through renewable energy offsets; recycling and reducing plastic waste backstage by using reusable aluminum water bottles; and offering sustainable supplies such as biodegradable/reusable catering products and local, organic food.



Reverb also coordinates the recycling of waste created at the events. "If you've ever seen an arena after a show, it's an incredible graphical representation of waste," said Mayer. "Reverb is an incredible organization that has come on the road with us day after day. It's trying to funnel consciousness ... and trash ... into the right places."

According to Reverb, over 1,000 tons of  $\mathrm{CO}_2$  will be reduced or eliminated through the use of B20 biodiesel and carbon offsets from both John Mayer's and The Fray's tours. This is equivalent to an average car not driving 2 million miles or removing 116 homes from the power grid for a year.

DES was pleased to be part of such an environmentally progressive event that was able to engage a large and varied crowd. It is these types of activities that further enhance DES's ability to protect and restore the environment and public health in New Hampshire through educating the public about current environmental issues.



Gov. Lynch (center) pictured with Egyptian scientists, Prof. Farag of UNH (far right), and Tim Drew of DES (far left).

# Egyptian researchers visit Interest in state's policies on biodiesel

In June, six delegates from the National Research Center in Cairo, Egypt came to UNH to exchange information with the UNH Biodiesel Group, which is under the direction of Prof. Ihab Farag of the Chemical Engineering Department. The exchange occurred under the auspices of the US-Egypt joint project: "Biodiesel Fuel from Non-Edible Vegetable Oils." The delegation also met Gov. Lynch and the Executive Council while visiting Concord. Following a tour of the State House, the group met with DES officials to discuss the technical, institutional, and regulatory aspects of biodiesel production in New Hampshire.

## State a leader in Energy Star home construction

recent analysis shows that in 2006, the percentage of newly constructed, single family homes earning the government's Energy Star label for superior energy efficiency exceeded 12 percent in 15 states—one of which is New Hampshire. Seventeen percent of new homes constructed last year in the state were Energy Star certified homes.

"Consumers don't have to limit their smart energy choices to energy



Homes must be independently verified as meeting EPA's strict guidelines.

efficient cars and appliances," said Robert Varney, regional administrator of EPA's New England office, "but more and more can choose high-efficiency, low-emission systems in their homes."

To earn the Energy Star, homes

must be independently verified as meeting EPA's strict guidelines for energy efficiency. Typically, they include



(Above) New construction of Energy Star homes in New Hampshire is on the rise. Well insulated furnaces (right) and pipes are just two energy efficient features that improve performance and lower utility bills in an Energy Star qualified home. Photos courtesy of Ray Gordon.

energy-saving construction features that make them 20 to 30 percent more efficient than standard homes. The features also deliver better performance, greater comfort and lower utility bills, all while helping to protect the environment.

Home energy use accounts for nearly 17 percent of the total US greenhouse gas emissions and 21 percent of energy consumption nationwide. In 2006, Americans, with the help of Energy Star, saved \$14 billion



and prevented greenhouse gas emissions equivalent to those from 25 million vehicles.

In addition to energy efficient home construction, New Hampshire ranks #2 nationally in the overall percentage of appliances sold that are Energy Star rated.

For more information on Energy Star homes, please go to www.energystar.gov/homesindex.

## DES partners with EPA's WaterSense program



ES has a formed a partnership with the EPA WaterSense program to help promote water efficiency in our state. The program will make it easy for consumers to find and select water efficient products and services with a label backed by independent testing and certification. Look for WaterSense labeled products at your local home improvement store later this summer.

Water utilities may also form partnerships with the WaterSense program. The utility will in turn receive valuable outreach materials that may be used to supplement existing demand management efforts.

Irrigation professionals may join the WaterSense program through certification. Distinguish yourself from the competition by promoting your commitment to the use of water efficient irrigation practices in the field.

To learn more about the WaterSense program, partnership opportunities, and to see the products that have undergone certification, please visit www.epa.gov/ watersense/, or contact Derek Bennett, DES, at (603) 271-6685 or dbennett@des.state.nh.us.



Children are more susceptible to exhaust pollution, especially diesel exhaust. Adopt a no-idling policy at your school. DES has many ideas and tools to help principals get started, including free materials. To learn more, contact Kathy Brockett at (603) 271-6284 or kbrockett@des.state.nh.us.

# Intensive campaign launched to keep rock snot at border

Quickly after *Didymosphenia geminata*, the invasive aquatic alga also commonly known as rock snot, made its first known northeastern US appearance this summer, officials from New Hampshire and Vermont launched an intensive campaign to enlist anglers, boaters and others who use the states' waters in the assault on the messy, aquatic invader. A radio campaign complemented the ground efforts of biologists, anglers and volunteers who fanned out along the White and Connecticut rivers, searching and identifying areas at risk.

DES Commissioner Tom Burack said that the threat to the region's waterways is real. "Experts on both sides of the Connecticut River mobilized and formulated a regional approach to stopping didymo's spread," he said. "Our cooperation will continue in the months ahead, as biologists from Vermont and New Hampshire search for ways to mitigate this potential hazard to aquatic life in our rivers."

So far, the alga – which threatens the health of many species of fish – has been confirmed in the upper Connecticut River and in two locations six miles apart on the White River in the towns of Royalton, Bethel and Stockbridge. Since this press event, didymo was documented in the Connecticut River from just above Lake Francis south through Stratford, N.H.

"As biologists from both Vermont and New Hampshire have made clear, it is nearly impossible to eradicate rock snot once it appears in a waterway," said Vermont Agency of Natural Resources Secretary George Crombie. "However, its spread can be slowed with the help of the public. This campaign was designed to arm the public with the knowledge of how to properly disinfect their boats, fishing gear and clothing once they've been in the water. An invasive alga like this has no respect for state boundaries, so it is imperative that we work together to quell its spread."

Biologists from the two states as well as representatives of the U.S. Fish and Wildlife Service, Trout Unlimited and a cadre of volunteers have developed a regional rock snot strategy, and will continue their outreach efforts in the spring when boating and fishing in the rivers resume.

# Tri-state ski operators come together to promote Green Slopes

The DES Pollution Prevention Program and the Granite State Clean Cities Coalition recently collaborated on a workshop for the ski industry titled, "Green Slopes Series 2007: Reducing Emissions One Engine at a Time." This was the first annual meeting where representatives from New Hampshire, Vermont and Maine ski facilities came together to discuss climate change impacts and strategies to reduce emissions at ski areas. Over 40 people attended the meeting held at Loon Mountain in Lincoln.

Since the meeting all nine facilities from New Hampshire in attendance have initiated or continued their anti-idling policies. Two facilities have had meetings with local biodiesel vendors, and all of the facilities are interested in converting to biodiesel. Many are interested in recycling projects, reducing energy consumption and buying green products. A representative from Ski New Hampshire has also agreed to help DES form a round table committee to discuss ways of furthering the "Green Slopes" movement at New England's ski slopes.



All in a day's work. Carl Woodbury and George Carrigan (not pictured) of the DES Special Investigations Program, recently helped retrieve a wayward propane tank from an island in the middle of the Merrimack River. The 550+pound tank, which had washed into the river during the April 2007 floods, was determined to have come from a construction site in Allenstown. With the help of staff from Energy North, the tank was emptied and removed from the river.

# Supreme Court upholds decision

In a unanimous decision issued July 18, 2007, the New Hampshire Supreme Court affirmed the decision of the Coös County Superior Court in the case brought by the State against Joseph and Rose Marino. The State's case sought redress for multiple violations committed by the Marinos of state laws protecting wetlands (RSA 482-A), shorelands (RSA 483-B), and water quality (RSA 485-A) during the construction of a house on property abutting Back Lake in Pittsburg. (See November/December 2006 Environmental News for complete story.)

The Supreme Court specifically determined that the "plain meaning of [RSA 483-B:10, I] allows DES to impose conditions on any construction of a single-family home on a nonconforming undeveloped lot of record" within the protected shoreland zone. The Supreme Court also affirmed the Superior Court's imposition of a \$65,000 penalty and a requirement for the Marinos to obtain all requisite permits from DES.

#### Try the tap!

pesponding to pressure from the public-interest group, Corporate Accountability International, PepsiCo recently agreed to change the labels on its Aquafina water bottles to spell out its source: tap water.

This has brought to the forefront a number of facts that counter the widespread misperception that bottled water is better, as well as safer and more environmentally friendly, than tap water.

A recent blind taste test in Boston's Copley Square conducted by Corporate Accountability International demonstrated that the public "including an employee of Poland Springs " could not tell the difference between bottled water and the city's public drinking water.

Taste isn't the only way that tap water exceeds bottled water. On average, tap water costs less than a cent per gallon. At this rate, you can drink about 160 gallons of pleasant-tasting, pure tap water for the cost of 16 ounces of bottled water.

In terms of public health and safety, all public drinking water supplies are regularly and rigorously monitored and tested for more than 100 potential contaminants.

From an environmental perspective, tap water is also "green water," leaving behind no bottles to clog landfills and consuming no extra energy for the production of bottles.

Furthermore, every day, public water suppliers deliver the essential element for human life, a vital resource for business and industry, and a major weapon for fighting fires.

Drop by drop, tap water is the better value.

Raymond J. Raposa, Newton, Mass. Executive Director, New England Water Works Association

This letter to the editor, appeared in the Concord Monitor, August 11, 2007 and is reprinted here with permission.

### SEC okays Lempster wind power project

The New Hampshire Site Evaluation Committee (SEC) recently issued a "def L cision and certificate of site and facility" to Lempster Wind LLC that gave the go-ahead to begin construction of the state's first large-scale, commercial, wind-powered electricity generation facility. The erection and operation of 12 individual wind turbines would generate up to 24 megawatts of electrical energy for sale to the regional grid. The project is located along the ridgeline of Lempster Mountain in the town of Lempster.

The project was evaluated in accordance with the requirements of RSA 162-H, "Energy Facility Evaluation, Siting, Construction and Operation," and programs related to environmental, financial, managerial and legal considerations by the 14-member SEC. The DES members on the SEC include the commissioner and the directors of the Water and Air Resources divisions.

Key issues of concern in the Lempster application included the orderly development of the region and possible impacts caused by shadow flicker, viewsheds, historic sites, air and water quality, ice throw off the turbine blades, noise, and other considerations. Both written and oral testimony on each of these topics was gathered by the SEC over a period of ten months and resulted in the issuance of a certificate of site and facility for the project, accompanied by numerous appendices containing specific terms and conditions to ensure the project was sited, constructed, and operated in accordance with all applicable laws and standards. The decision is subject to appeal to the New Hampshire Supreme Court. To view the final documents and decision, please see http:// nhsec.state.nh.us/current.htm.

## DES managers chosen for Leadership programs

im Drew, administrator of the DES Public Information and Permitting Unit,

and Ted Diers, manager of the New Hampshire Coastal Program, have been accepted into upcoming Leadership programs, giving them unique opportunities to explore in-depth some of the many issues and challenges facing New Hampshire's decision makers today.

Ted will be participating in Leadership New Hampshire, which looks at broader, statewide issues. The program, which concludes in May 2008, allows participants to interact with top state officials, judges, educators, prison inmates, students, artists, corporate leaders and others who receive, deliver or make decisions and policy that affect services.

Tim will be participating in Leadership Lakes Region. The program focuses on the important aspects of civic life by exploring and increasing general understanding of the history and culture, economic, political, social and educational issues unique to the Lakes Region. The eight-session program begins in October and also concludes in May '08.



Ted Diers



Tim Drew

More information on these Leadership programs can be found at www.leadershipnh.org and www.leadershiplakesregion.org.

## Annual Drinking Water Expo, October 31

he N.H. Water Works Association (NHWWA) will host the annual N.H. Drinking Water Exposition and Trade Show. This year's expo will be held on Wednesday, October 31 at the Center of New Hampshire, 700 Elm Street, Manchester. The expo will run from 8 a.m. to 4 p.m. There will be over 100 exhibitors and 25 seminars. There is no admission fee to visit the displays or the exhibition hall. There is a flat \$20 admission fee to attend the seminars. Contact hours will be awarded for attending the seminars. Registration forms and payment information will be sent to all public water systems and New Hampshire-certified operators, as well as members of the NHWWA during the month of September. Pre-registration is encouraged. Seminar topics include mutual aid, GIS, treatment and distribution issues, sampling issues, excavation safety, leak detection, metering, and much more. If you have any questions about the expo, please contact the NHWWA at (603) 415-3959 or NHWWA@worldpath.net.

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cial environment and help stem global warming.

We recommitted ourselves to preserving New Hampshire's unique character.

The Land and Community Heritage Investment Program is one of the best programs implemented by the state. It allows us to partner with communities and private groups to preserve what is special about New Hampshire, our open spaces and historic buildings. By fully funding LCHIP for the next two years we are recommitting ourselves to ensuring New Hampshire's unparalleled landscapes will remain for future generations to enjoy.

We also acted to protect open spaces that the state already owns – our state parks. Our state parks are treasures for all of our citizens and visitors to enjoy. They are part of the reason so many people come to New Hampshire again and again with their families. But we cannot take our parks for granted, which is why I was pleased to join with lawmakers to make the first system-wide capital investment in our state parks in more than 40 years.

Two years ago, I signed legislation

creating a commission to study the Comprehensive Shoreland Protection Act. This year I signed into law two bills containing the recommendations of that Commission. These bills will strengthen the valuable, yet fragile, shorelands of our state by strengthening the waterfront buffer zone and closing existing loopholes. These new laws ensure our shores will be protected and the integrity of our public waters will be maintained.

This year we were also successful in further protecting New Hampshire citizens from the harmful affects of mercury. By banning the disposal of products containing mercury in our state's landfills, we are better protecting our groundwater and natural resources from this harmful pollutant. I was also proud to sign legislation limiting the sale of products, such as barometers and other instruments, containing mercury in New Hampshire.

We have acted to better protect New Hampshire's environment and I look forward to continue working with lawmakers and the Department of Environmental Services to help ensure future generations can enjoy what makes New Hampshire so special.

John Lynch Governor



Pawtuckaway foliage. Photo courtesy of Spruce Wheelock.



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